

In the Name of God
Geological survey of Iran

**Main activities of Geological survey of
Iran**

At First six months 1386

Technology and planning management
1386

Six months performance report

Introduction:

The exploration and geology is a general word that it has play the basic role at different culture and economic and even political aspects in countries from for post. Hence New days in many countries of the world such and Iran, it has been paid a. special attention to review the exploratory and geology, and in order to expand this section.

The wide exclusive – researches centers have been established and they are activating that sometimes it's importance and valid is very much (Like Us Geology organization. USGS and France Geology organization, BRGM). In Iran, like many countries of the world, based on the following note, Article of the mine and industry affairs concentration Act enacted 12/5/79 , The exploration, geology studies and the mining reserves and sources identification is the charge of the government sovereignty which on the basis of the enactment No: 1/12/1039b of administrative supreme council, the doing this is considered as main task of state civil mining exploration and geology organization related to mines and industries ministry, so that it can act in the field of the identification and use of mining potential power and advantages and also economic infrastructures.

It is said that in current years, the use of new technologies and the revision in the puts structure of the geology organization has been put at the working instruction based on legal recommendations (Article for concentration Act and Articles of fourth program Act) and with a new research managements establishment, part of the exploratory and geology reviews, The basic evolutions have curried out in other earth sciences applied fields such as geology telecommunication, marine geology, earth sciences database establishment and etc.

20 years perspective of state geological survey of iran.

To provide the necessary infrastructures and fields for growing the exist knowing activities and a stable country development through the geology

environments identification, sources knowledge and the mineral reserve exploration, and the geohazards controlling and inducing processes detection and their monitoring and the earth sciences database expansion.

Strategies of geology section:

- To help to establish a security society and safe environment.
- To develop the information infrastructures based on axis knowing activity grow.
- To develop the human sources and earth sciences technology powers.
- To develop the geology standards in designing and performing developmental plans.
- To inform as active in the fields of the earth sciences.

Strategies of mineral exploration section:

To increase the state civil competition power in the mine section through the mining reserve exploration.

- To expand the mineral exploration capability
- To develop the human sources and the exploratory technology powers.
- To participate in the region development and the making – employment

Aims:

- 1 – To make the policy and national planning at the exploration and geology affairs.
- 2 – To identify the geology environments and the state civil mining potentials and to provide the obtained results as " applied and basic information" for using at the infrastructure, civil, economic and social plans.
- 3 – To research in the fields of land use planning from the engineering, environmental and hazards viewpoint.
- 4 – To research in the field of the state seismic regions knowledge with providing the executive alternatives of the industrial – urban development with the aim of declining and avoiding from the social and economic damages.
- 5 – To research in the field of the bonks engineering knowledge and the state civil aqueous environments non- live natural material exploration.

6 – To explore the new state civil mining reserve, at a different phases of the regional exploration, prospecting, and general exploration up to pre-feasibility stage with the aim of providing a necessary advantages and fields for making-employment and state civil development and grow.

7 – To collect, process and update the earth sciences data and to expand the information infrastructure with the aim of supplying the researchers and mining industries and mining information needs.

8 – To perform the common research projects (inland and outland) and to help to applied training of the state civil high devotion centers.

Along with these aims, the following activities have been performed at first six months 1386:

1 – Policy – making and planning and monitoring to the exploratory and geology reviews:

- To formulate the mineral exploration program in the provinces (169 exploratory projects)
- To make the performance policies for issuing the earth sciences engineering – Technical service.
- To revise the comprehensive geological maps quality management system.
- To formulate the human sources planning plan.
- To formulate the organization research and training program.
- To formulate the provinces exploratory and geology studies programs.

To set the organization activities agreements (including cost validities and two civil plans)

2- To identify the geology environments and to prepare the geology maps at different scales as one of main sovereignty aims of state civil mining exploration and geology organization.

2-1- Applies geology maps preparation, with growing a population and also society needs, the access to the mineral economic potentials on one side, and god's and hazards decline and avoidance and the clean and safe environment establishment on the other , is propounded that it's primary need is the presence of the applied geology maps.

These maps , which is prepared using new technologies and knowledge , have very useful information for the civil plans executors and planners and designers.

These maps is about 10% civil projects validity.

In this way, the state civil mining exploration and geology organization has put at it's working instruction the applied geology maps preparation at 1:25,000 scale after completing the reviews at 1:25,000 and 1:100,000.

The geology maps 1:25,000 are prepared using a suitable satellite information and on topography maps basis 1: 25,000 with a more precise surveys and the applied and suitable standards and as digit package.

The applied maps layers 1:25000 include a general geology, engineering geology, environmental geology, geohazards, engineering geomorphology , and economic geology indicating the following information:

- The general geology layer : including information related to rock units age and genus , foundries between them and kinds of these boundaries, units petrology features, and their relative geochemical studies, faults and folds. The information of this layer is used ad basis for preparing other layers.

The engineering geology layer : including rocks and soils units engineering features.

The environmental geology layer: including an information related to the human effects to soil and water environment and these environments effects to human, and the mineral contaminant effect whether as the existing harmful elements. The nature and as the materials made from the mining activities in this layer is reviewed.

The engineering geomorphology layer including the zone geomorphic elements features from the engineering and genetic viewpoint.

The geological hazards layer including an information related to the geological making – hazard phenomenon's like landslide and other kinds of earthquake masses movements (slope instability) and seismic, flooding, seas level variations at coastal regions, volcanoes Andete.

The economic geology layer including all information about mining signs, active and passive mines of the mining masses features, mineralization model and economic reviews.

In this way , at first six months 1386.in additional to the map completion 1385.The new reviews have been also started that the physical

progression has been so far caused:

Maps physical progression at 1:25000 scale						
Final progression Percent		Province	1:100, 000 map Name	1:25000 map Name	Name of Information layer	Range
86	85					
79	58	Gilan	Masule	Masule 1	Geology	1
87	6	Gilan	Masule	Masule 2	Geology	2
22	0	Esfehan	Kashan	Gamsar	Geology	3
24	0	Esfehan	Kashan	Gahoud	Geology	4
59	59	Esfehan	Ashin	Soheil	Geology	5
65	59	Esfehan	Ashin	Seprou	Geology	6
90	61	Esfehan	Chadgan	Dolat-Abod	Geology	7
90	71	Esfehan	Chadgan	Gonharan	Geology	8
90	78	Esfehan	Dehaghan	Kouh-Ghole-Shiah	Geology	9
10	10	Esfehan	Mahallat	Morgh-Bala	Geology	10
42	42	North-Khorasan	Kod-kan	Ghasem-Abad	Geology	11
51	51	North-Khorasan	Foriman	Sardasht	Geology	12
65	54	Zanjan	Tarum	Khiz-Abad	Geology	13
65	54	Zanjan	Tarum	-	Geology	14
90	83	Zanjan	Tarum	Amir-Abad	Geology	15
90	83	Zanjan	Tarum	Emam	Geology	16
71	59	Zanjan	Tarum	Dastjerd	Geology	17
71	59	Zanjan	Tarum	Ghal'e	Geology	18
90	80	Zanjan	Tarum	Zaker	Geology	19
90	80	Zanjan	Tarum	Galije	Geology	20
93	71	Semnan	Shohroud	Shahroud	Geology	21

91	71	Semnan	Shohroud	Mand-Abad	Geology	22
24	24	Semnan	Rezveh	Cnah-zir- chah	Geology	23
24	24	Semnan	Rezveh	Sahl	Geology	24
44	0	Semnan	Jam	Jam	Geology	25
33	0	Semnan	Damjhan	Mazrae- Taluo	Geology	26
10	0	Tehran	Gormsor	Tong-Bolan	Geology	27
56	56	Kermanshah	kermanshah	-	Geology	28
50	47	Kermanshah	kermanshah		Geology	29
50	47	Kermanshah	kermanshah		Geology	30
50	47	Kermanshah	kermanshah		Geology	31
86	29	Semnan	Froumad	Roh- chaman	Geology	32
17	17	East- Azarbayjan	Kalibar	YouzBond	Geology	33
17	17	East- Azarbayjan	Kalibar	Ambasigh	Geology	34
17	17	East- Azarbayjan	Kalibar	Samiran	Geology	35
17	17	East- Azarbayjan	Kalibar	Ghalandar	Geology	36
8	0	Tehran	Damavand	Arou	Geology	37
10	0	Zanjan	Soltanieh	Veer	Geology	38
17	0	Lorestan	Khoram- Abad	Pol-Harou	Geology	39
80	74	East- Azarbayjan	Maraghe	Alghou	Geology	40
8	0	Tehran	Damavand	Sorbandan	Geology	41
8	0	Tehran	Damavand	Ayne- Varzan	Geology	42
53	53	Semnan	Farumad	Jonoub- Kohne	Geology	43
67	55	Semnan	Davar-Zan	Bizeh	Geology	44
88	59	Qom	Qom	Shorf-Abad	Geology	45
88	24	Qom	Qom	Mazrae-e- heshlagh	Geology	46
88	81	Mazandaran	Noushah,	Nezam- Abad	Geology	47

88	81	Mazandaran	Noushah,	Poul	Geology	48
90	79	Mazandaran	Baladeh (Noushahr)	Hamze-Deh	Geology	49
90	79	Mazandaran	Baladeh (Noushahr)	Kayour	Geology	50
93	62	Mazandaran	Chalovs	Valasht	Geology	51
30	4	Mazandaran	Chalovs	Kelardasht	Geology	52
10	10	Hamedan	Hamedan	Hamedan1	Geology	53
47	19	Hamedan	Toyserkan	Hossein- Abad Ashouri	Geology	54
5/7	0	Esfehan	Mahallat	Jahl-Roz	Geology	55
5/7	0	Esfehan	Mahallat	Robat- Marad	Geology	56
25	0	Esfehan	Shahreza	Shahrak- Servestan	Geology	57
14	0	Yazd	Yazd	Shorb- Alein	Geology	58
15	0	East- Azarbayjan	Jolfa	Kouh-Nab	Geology	59
21	21	Khorasan Razavi	Fariman	Sang-Bost	Geology	60
42	0	Khorasan Razavi	Fariman	Char-Bast	Geology	61
19	10	Esfehan	Naeen	Mazrae- Haj-Moein	Geology	62
19	10	Esfehan	Naeen	Hojat-Abad	Geology	63
30	0	East- Azarbayjan	Meshkin- shah	Razligh	Geology	64
45	36	South- Khorasan	Jonub-se- chaagi	Tapeh- Shekashte- Biyabou	Geology	65
7	0	Khorasan- Razavi	Nayshabour	Bouzh- Mehran	Geology	66
10/5	0	Khorasan- Razavi	Torghabeh	Garineh	Geology	67
10/5	0	Khorasan- Razavi	Mashhad	Bar	Geology	68

23	15	Khorasan-Razavi	Torghabeh	Payeh	Geology	69
28	28	Khorasan-Razavi	Mashhad	Bidak	Geology	70
93	44	Khorasan-Razavi	Mashhad	Torogh	Geology	71
70	35	Khorasan-Razavi	Mashhad	Deh-Qeybi	Geology	72
90	26	Khorasan-Razavi	Mashhad	Mashhad3	Geology	73
83	41	Khorasan-Razavi	Mashhad	Mashhad5	Geology	74
83	41	Khorasan-Razavi	Torghebeh	Mashhad6	Geology	75
90	61	Khorasan-Razavi	Torghebeh	Torghebeh	Geology	76
90	64	Khorasan-Razavi	Torghebeh	Shandiz	Geology	77
20	20	Khorasan-Razavi	Torghebeh	Golmakan	Geology	78
10	10	East-Azərbayjan	Tabriz	Sahlan	Geology	79
78	55	East-Azərbayjan	Sisya-Roud	Kharvana	Geology	80
62	50	East-Azərbayjan	Varzaghan	Anjerd	Geology	81
42	35	East-Azərbayjan	Osko	Khosro-shahr	Geology	82
30	30	East-Azərbayjan	Osko	Osko	Geology	83
90	90	East-Azərbayjan	Tabriz	Tabriz1	Geology	84
90	90	East-Azərbayjan	Tabriz	Tabriz2	Geology	85
90	60/5	East-Azərbayjan	Tabriz	Kargaj	Geology	86
42	10	East-Azərbayjan	Tabriz	Taze-kand	Geology	87
90	90	East-Azərbayjan	Tabriz	Ana-khatoon	Geology	88
27	0	East-	Tabriz	Mayan	Geology	89

		Azarbayjan				
18	10	East-Azarbayjan	Osko	Shad-Abad Mashayekh	Geology	90
30	10	East-Azarbayjan	Siyah-Roud	Kabood-Gonbad	Geology	91
71	0	Khozestan	Ahvaz	Om-altanir	Geology	92
71	0	Khozestan	Ahvaz	Ahvaz	Geology	93
71	0	Khozestan	Ahvaz	Zargan	Geology	94
71	0	Khozestan	Masjed-soleyman	Masjed-soleyman	Geology	95
71	0	Khozestan	Masjed-soleyman	Rahdor	Geology	96
27	0	Khozestan	Masjed-soleyman	Hassan-Abad	Geology	97
27	0	Khozestan	Masjed-soleyman	Ladazi	Geology	98
20	10	Khozestan	Lali	Lali	Geology	99
10	10	Kohkilouyeh & Boyer-Ahmad	Yasovj	Yasouj	Geology	100
10	10	Khozestan	Behbahan	Behbahan	Geology	101
8	0	Khermanshah	Kermanshah	Khosrou-Abad	Geology	102
38	0	Hamedan	Hamedan	Hsme-kasi	Geology	103
29	0	Kerman	-	Baha-Abad	Geology	104
42	0	Kerman	Zarand	Zarand	Geology	105
44	40	Kerman	Kerman	Sor-Asiab-Farsangi	Geology	106
7	0	Kerman	Kerman	Kerman1	Geology	107
27	0	Kerman	Kerman	Kerman2	Geology	108
31	0	Kerman	Negisan	Ziyarat-shah	Geology	109
31	0	Kerman	Negisan	Dozakh-Dareh	Geology	110
18	0	Kerman	Kouhbanan	Kouhbanan	Geology	111
13	0	Fars	Kolestan	Kilestan	Geology	112
39	0	Fars	Kolestan	Govim	Geology	113
90	0	Fars	Kolestan	Shiraz4	Geology	114

74	0	Fars	Kolestan		Economic	115
90	0	Fars	Kolestan	Shira3	Geology	116
1	0	Fars	Shiraz	Shiraz2	Geology	117
21	0	Fars	Shiraz	Shiraz1	Geology	118
19	0	Fars	Kolestan	Khon-khamis	Geology	119
19	0	Fars	Kolestan		Economic	120
90	0	Fars	Kolestan	Ghalat	Geology	121
90	0	Fars	Kolestan		Economic	122
2	0	Fars	Shiraz	Kaftarak	Geology	123
56	56	Zanjan	Tarum	Lahneh	Economic	124
65	65	Esfahan	Dare-Bid	Dare-Bid	Economic	125
90	90	Kerman	Midouk	Latatla	Economic	126
44	44	Mazandaran	Kiasar	Souchelmaz	Economic	127
90	90	West-Azarbayjan	Naghodeh	Zytoun-Jian	Economic	128
90	90	West-Azarbayjan	Naghodeh	Khorapeh	Economic	129
72	70	Hamedan	Toyserkan	Homedan2	Geology	130
85	45	Tehran	Kordan-Hashtgerd	Khor	Engineerign geo morphology	131
85	45	Tehran	Kordan-Hashtgerd	Fashand	Engineerign geo morphology	132
85	45	Tehran	Kordan-Hashtgerd	Hashgerd	Engineerign geo morphology	133
85	45	Tehran	Kordan-Hashtgerd	Tavousie	Engineerign geo morphology	134
75	35	Tehran	Kordan-Hashtgerd	Khor	Hydrogeolgoy & environmental geology	135
75	35	Tehran	Kordan-Hashtgerd	Fashand	Hydrogeolgoy & environmental geology	136
75	35	Tehran	Kordan-	Hashtgerd	Hydrogeolgoy	137

			Hashtgerd		& environmental geology	
75	35	Tehran	Kordan-Hashtgerd	Tavousie	Hydrogeology & environmental geology	138
40	20	Tehran	Kordan-Hashtgerd	Khor	Hazards	139
40	20	Tehran	Kordan-Hashtgerd	Fashand	Hazards	140
40	20	Tehran	Kordan-Hashtgerd	Hashtgerd	Hazards	141
40	20	Tehran	Kordan-Hashtgerd	Tavousie	Hazards	142
50	25	Tehran	Kordan-Hashtgerd	Khor	Engineering geology	143
50	25	Tehran	Kordan-Hashtgerd	Fashand	Engineering geology	144
50	25	Tehran	Kordan-Hashtgerd	Hashtgerd	Engineering geology	145
50	25	Tehran	Kordan-Hashtgerd	Tavousie	Engineering geology	146
2/5	0	East-Azərbayjan	Tabriz	Mayan	Environmental geology	174

By end of 1385 , equivalent 42/75 maps had fulfilled that at first six months 1386, This number has increased to 70/15 maps. (equivalent 27/4 maps have been prepared in these six months.)

At continuing the private sector activities related to the agreements year 1385 , The following physical progression has been caused by end of first six months 1386:

Final Progression Percent		Province	Map Name	Layer Name	Range
86	85				
76	49	West – Azərbaycan	Hang –Abad	Geology	1

76	53	West Azarbayjan	– Nalous 3	Geology	2
55	41	West Azarbayjan	– Nalous4	Geology	3
76	53	West Azarbayjan	– Sarve –Silvaneh	Geology	4
76	53	West Azarbayjan	– Sarve –Silvaneh	Geology	5
35	35	Yazd	Abdoghi-Rahim Abad	Geology	6
35	29	Yazd	Abdoghi-Hoz-ghani	Geology	7
35	23	Yazd	Abdoghi-Zarigan	Geology	8
35	21	Yazd	Abdoghi-Kouh- Band marazan	Geology	9
43	43	Yazd	Aliabad	Geology	10
43	43	Yazd	Marzrae-Moshiroie	Geology	11
43	43	Yazd	Ahmad-Abad	Geology	12
55	43	Yazd	Esfang	Geology	13
43	43	Yazd	Harisak	Geology	14
39	39	Esfehan	Baqe-Latifan	Geology	15
90	56	Esfehan	Ivaj	Geology	16
35	0	Tehran	Damavand	Geology	17
35	18	Esfehan	Nakhlok	Geology	18
35	0	Esfehan	Izad-khast	Geology	19
85	65	Khorasan Razavi	Mashhad	Hazards	20
90	70	Kerman	Kerman	Hazards	21
55	20	Tehran	Abali	Hazards	22
55	0	Tehran	Lavasan	Hazards	23
75	60	East- Azarbayjan	Tabriz	Hazards	24
85	45	Khozestan	Ahvas	Hazards	26
85	65	Khozestan	Rahdar	Hazards	27
85	65	Khorasan Razavi	Moshhad	Engineering Geomorphology	28

90	75	Kerman	Kerman	Engineering Geomorphology	29
55	20	Tehron	Abali	Engineering Geomorphology	30
85	60	Kharsand Razavi	Mashhad	Environmental geology & hydrogeology	31
80	45	Khozestan	Ahvaz	Environmental geology & hydrogeology	33
85	65	Khozestan	Rahdar	Environmental geology & hydrogeology	34
90	70	Kerman	Kermand	Environmental geology & hydrogeology	35
80	55	East.Azarbayjan	Tabriz	Engineering geology	36
85	45	Khozestan	Ahvas		37
75	50	Tehran	Lavas an-Bozorg	Engineering geology	38
85	65	Khozestan	Rahdar	Engineering geology	39
90	75	Kermand	Kerman	Engineering geology	40
55	20	Tehran	Abali	Engineering geology	41
85	65	Khorasan- Razavi	Mashhad	Engineering geology	42

By end of 1386. The equivalent 1815 maps had fulfilled that at first six months 1386. This number has been increased to 26/95 maps. (The equivalent 8/55 maps have been prepared by private sector in these six months).

Other activities:

The geology maps revision plan:

- Alborz united guide preparation (90%)
- Sanandaj-Sirjan united guide preparation(30%)

2-2- 1:100/000 maps thorough cover completion:

1:50000 1: 100/000 maps position							
Region or map Name		Map number		Scale	Map subject		Range
First six months	85	First six months	85				
Kodakon chohchahe	Iranshahr – Fariman – Delijan – Chanof – Ghesemabad	2	5	1:100000	Systematic geology maps reviews completion		1
Silvane – Bezman	Varamin – Chah dashi – Frarouj – Mosavieh – Akhlamad – Khaje – Chedgon – Myme – Birak 1- Ferydonshahr – Kerit – Tizhtizh – Hamyaran – Bayenjub – Cunadermelo – Shazand – Alibad – Malemoq – Birak 2 – Dfehaghan – Aghda – Fasa – Sharghkhoh gogerd – Lar – Serveston – Marzban – Namardon – Kouhgogerd – Uromieh – Dehsard – Daruneh – Berdeskan	2	32	1:100000	Final Print	Geology maps Print & Publication	2
Varche – Rostang Taherabad – Bejestan Monallat-Parng – Robotposht badam – mery	Varche – Silvan – Bezamon Rostagh- Taherabad Bejestan - Mahallat – Dolatabad	8	8	1:100000	Preliminary Print		
Abali-	-	3	-	1:25000	Preliminary		

Lavasan – Alghu					Print		
Grinong – Neer – Siea cheshmeh Ghare Sghaj- Zavieh	Robat Posht badm Grimong – Neer – Parvang – Siea cheshmeht.	5	5	1:100000	Preliminary Print	Cartography	
Hamedan2 – Shiraz4	-	2	-	1:25000	Preliminary Print	Evaluation Council	
Shahre Kord- Raz Pave & Gharbe Pave – Marivan – Kuhin – Robatkarim – Kenarak – Fariman – Robat sefid	Mery – Shaherkord – Zarvieh – Raz – Pave – Gharbe Pave – Marivan – Kuhin – Robot karim –Ghare Aghaj	9	10	1:100000	Preliminary Print		
Esfehan – Mashhad – Qazvin – Nayshabur	Esfehan – Mashhad Qazvin	4	3	1:50000	Geology	Engineering geology maps	3
Qazvin – Mashhad – Esfehan	Qazvin	3	1	1:50000	Geomorphology		
Nayshabur – Esfehan – Mashhad	Nayshobur – Esfehan	3	2	1:50000	Geomorphology	Hydrology	
Nayshabur – Esfehan	-	2	-	1:50000	Geomorphology	Engineering	

2-3 – Geology laboratory studies:

Reviewed sample Number	Review Type	Lab	Range
911	Microscopic samples review	Petrology	1
673	Thin cuts study		

336	Free samples study	Paleontology	2
159	Palinomorph study		
85	Macrofossil study		
18	Conodont study		

3 – Research at the fields of land use planning from the engineering, environment and hazards viewpoint:

An abundance of God's act and geology hazards such and Flooding, avalanche , Landslide , earthquake and etc are part of challenges in the country, that state geological survey of Iran plays a basic role in resolving it's problem. So that it can decline the society susceptibility, the huge financial source waste and as a result, the national gross income decline and the delay in a stable development trend. For this reason , in current years the environment and engineering geology applied studies have formed a part of geology organization activities.

At first six months 1386. The following activities have been carried out in this relation:

1 – Specialized reports preparation:

- Buildings damage report and the causes review of these damages at karaj city (2 reports)
- Karaj fire source zone landslide report
- Saveh bridge collapse
- Landfall next to mashhad – Tehran railroad.

2 – Hazards review caused from subsidence:

- To perform the service by the contractor (90% seismic geophysics, 65% geoelectric, 35% geotechnics , and 85% hydrology) in Tehran Dashte – Jonob.
- To prepare the service description and the hazards review method caused from subsidence at Tehran province Plains including the hydrogeology

reviews at 5 plains : Tehran - shahriar , Varamin, Garchak, Nazarabad, Savojbolagh, Karaj – Eshtehard.

- To Complete the information collection at khorasan Razavi Province , to prepare and interpret the radar data about the subsidence at Mashhad plain to Nayshabur and to prepare the map at rate of subsidence.

- The general evaluation of plains that has been reviewed in 1386.

3 – Environmental geology reviews:

1 – Environmental geology field reviews at kordestan province – Bijar region.

2 – Cooperation with Germany karelceroh university related To the environmental geochemistry and fresh water pollution to arsenic and heavy metals at Bijar. Gharve region.

3 – The articles Translation and the information collection from the related sources regarding environmental pollutions discussion.

4 – Research regarding the country seismic zones recognition with providing the executive alternatives for the industry- urban development in order to decline and avoid from the social and economic damages:

The earthquake is a phenomenon in jointing with the earth evolution that can be a serious danger for human and her (his) habitat and properties, and sometimes it tends to an irretrievable event. The reviews show that the earthquake has a second rank at the human kill and financial damage after the spouts, and it has been known among 40 natural hazardous phenomenon, that 10% financial damages and 30% human kill has related to the earthquake hazardous phenomenon.

From 1371 , state civil geology organization try to step regarding the earthquake zonation an recognition with performing Iran seismic Atlas plan.

At Fist six months 1386, the following activities have been performed in this case:

& To continue digitizing and to explored the existing faults over 1:100000 and 1: 250000 Maps for preparing Iran faults ID certificate.

- & To perform the field missions related to kopeh –Dagh and Binaloud structural and geology reviews plan.
- & office work and documents preparation related to maps 1: 25000 of Aru.Sarbandan, Ein- varzan, Mil and sharif- Abad.
- & To drill and review three trenches at Astane-Damghan fault and sampling for the age determination.
- & To drill and review Two trenches at kahrizak fault (South. Tehran)
- & To log and prepare kahrizak trench No:1 report
- & To Survey five GPS radar geophysics Traverse ant kahrizak region.
- & To perform topography survey by kinematics GPS at kahrizak region at the drilled trenches.
- & To complete Firouzkouh trench surveys and it's log correction.
- & To perform the common field functions with mont plie university in order to complete the previous surveys, sampling and a suitable places detection for continuing paleo seismology studies.
- & To build Tehran Hesarak Azad University site for mounting earthquakes electromagnetic precursors.
- & To record and interpret the obtained data from the earthquakes electromagnetic precursors station at Tochal.
- & To monitor the organization seismography station.
- & The necessary coordination with Islamic Azad university for continuing Hesarak precursors station No:4 contractions project.
- & To build Hesarak precursors station No:2 sensors and devices(Pounak)
- & To preliminary reviews and sessions in order to set up earthquake precursor records satins at the province centers and also new station construction possibility in order to study the ionosphere turbulences, at state geological survey of Iran site.
- & To continue monthly regular surveys from a central Alborz springs for reviewing and monitoring central Alborz earthquakes and Damavand volcano.

& To perform the field surveys and hold a preliminary sessions for a Damavand volcano event possibility:

& Analytic report of south-Tehran 86/6/2 earthquake.

& Preliminary report from the recorded electromagnetic anomalies at hours before Qom earthquake.

& Field review and Qom earthquake Preliminary report.

5- Research in the field of the recognition. Banks engineering and civil aqueous environments non-live natural materials:

The arm of marine geology studies is a stat civil aqueous planes and banks systematic review, with the continental priority and the effective factors recognition and the banks effectiveness method that is provided as a report and Atlas maps with 1:100000 scale. These studies have an importance from thee viewpoint : mine and geology, banks and sea engineering , security , political and notional problems.

At first sis months 1386 , some of activities yea -85 has been fulfilled and a new activities – have been started as follows:

1 – To prepare 25 satellite image maps.

2- To study, process and rationalize The south country GTM, ASTER & IRS satellite data.

3- To dispatch the sedimentology and banks morphology and geomorphology Teams to chabahr, region for reviewing the remained effects by Gono storm over Oman sea coasts that it's field functions and office works have been fulfilled with 100% progression.

4- The south – country raised banks review project that it's field functions and office works have had 30% progression.

5 – The cooperation regarding khazar, water surface fluctuation effect review report preparation over southern banks that it's office works have had 50% progression.

6- To prepare langeroud sheet remote sensing report.

7- To prepare Atlas and the Moharlou lake 1:5.... Plate sea geochemistry and chemistry report.

Marine reviews				
Physical Progression		Scale	Activity	Range
Office works	Field function			
21%	100%	Bir	1:100,000 sedimentary geochemistry and sedimentology report and Atlas	1
10%	100%	Gereti		
10%	100%	Pivashak		
5%	100%	Gabrik		
5%	100%	Jask		
5%	100%	West – Jask		
5%	100%	Sirik		
5%	100%	Taherauie		
100%	90%	Mehrlou lake		
100%	-	Chabahar	Remote sensing Atlas Preparation	2
70% 50%	-	South banks: -eastern section (11 plates) - western section (11 plates)		

6- Geomatics researches and review:

& To prepare 128 numbers of Spot + Aster satellite images for preparing 1: 25000 geology maps.

& To perform interferometer studies using radar data: subsidence : salmas, nayshabour and Mashhad Plain.

Earthquake field displacement: Fine Bandar Abas earthquake, Qeshm earthquake.

Landslide: North-Bojnourd (Ghare chay)

& To Translate and edit Geomatica guide book.

& To interpret the airborne geophysics data at Bazman Zone, and control the obtained anomalies with the foreign experts aid and to prepare the related report.

& To perform the field function and to continue the studies for detecting evaporates at Mahneshan-Ghoreaghaj axis.

& To perform the studies continuation for identifying the Skarns at kordestan province in order to find iron and tungsten potential.

& To perform the first reviews and studies of geodynamics at makran region and to detect GPS stations (about 40 stations).

& To design a flying blocks over sangan region.

& To prepare the surveyed airborne geophysics data at jolfa region (MAG... EM).

& To Process the surveyed airborne geophysics data at jiroft region and to provide the final report.

& To prepare a standard of 1: 100000 geology digit maps preparation.

& To digitize 12 numbers of 1: 100000 geology map according to the prepared standard.

& To correct and complete Iran 1: 1000000 geology digit map.

& To perform the first studies over detection the state geological survey indices and mines deposits and to prepare the mines certificate.

& To prepare central geomatica software. Data center of geomatica management.

& To collect, organize the information and the first modeling and assembling for the gold detection at firouzkoh- Taleghan axis.

& To complete the applied software for entering data model automatic information.

& To revise jabal barez exploratory zone (1: 25000 economic geology map preparation at jabal barez zone with using a satellite data for exploring the porphyry, copper and gold).

& To revise Esfandagheh exploratory zone (gossans control and detection related to the copper mineralization at Ghaleganj-Jazmurian axis).

& New reverses exploration of state civil mineral at different phases of regional explorations, the general prospecting and the reversibility with the aim of providing a necessary advantages and fields for making employment, country grow and development:

By 1377 , not having reliable information , time – consuming on studies and in particular long yield was a cause that not only non-public sector but also public sector has been not paid an enough attention to being basic the exploration and the required industries mining raw materials supply. For this reason, from economic view point .

The basic evolution performance was a necessary for the mines and industries ministry at exploration, so that with deleting multiple planning , performance and decision centers, the state civil exploratory affairs have on unique custodian. After the expertise reviews .

Enactment No: 1/12/10396 of administrative supreme council, the state civil exploratory affairs performance was considered from the basic tasks of the geology organization, and this organization was undertaken that is a policy-maker and executor of the government sovereignty tasks at the field of the reserves and sources detection and exploration using update technical knowledge by it’s structure modification. With regards to the assigned legal task, the organization activities has been at three phases as regional, prospecting general explorations at first six months 86 as follows:

7-1- Regional explorations:

Regional systematic geochemical reviews completion and preparation:

Map Name		Map Number		Scale	Subject	Range
1386	1385	86	85			
Golpayegan - Shahindezh	Torghabe-Sarskand	3	18	1:100000	Mineralized and heavy ore samples	1

- Tanguie	(Hashtroud). Miandoab- Zavie- Eshtehard- Naien- Robat karim- Garmsar- Qom- Varamin- Myme- Miane- Damavand- Mehdiabad- Chahnoa- Varzane- Ghareaghaj- Osko				review	
Ghare aghaj- Osko	Bane- lanjan- Dehbid	2	3	1:100000	Office Anomaly and providing works. control report	2
Torghabe	Salafchegan -Tehran- Ghazvin- Razan- Shahreza- Lanjan- Sanndag- Avag- Nayshabour -Maraghe	1	10	1:100000	Reviews completion report print and	3

7-2- Exploratory reviews at general and prospecting phases.

7-2-1- Geochemical exploration at 1: 25000 scale:

Project position		Province	Region	Range
1386	1385			
- Information collection completion - Explanatory studies field functions 100% - Sampling 100% - Lab. analyses	- Information collection completion - Explanatory studies field functions 100% - Sampling 100% - Lab. analyses 50%	Kordestan	Takab 1	1

100% - Total physical progression 85%	- Total physical progression 60%			
- Information collection completion - Explanatory studies field functions 100% - Sampling 100% - Lab. analyses 70% - Total physical progression 70%	- Information collection completion - Explanatory studies field functions 100% - Sampling 100% - Lab. analyses 50% - Total physical progression 60%	Kordestan	Takab 2	2
- Information collection completion - Explanatory studies field functions 100% - Sampling 100% - Reporting 98% - Total physical progression 98%	- Information collection completion - Explanatory studies field functions 100% - Sampling 100% - Reporting 90% - Total physical progression 90%	Kerman	Tanghuie	3
- Information collection completion - Explanatory studies field functions 100% - Sampling 100%	- Information collection completion - Explanatory studies field functions 100% - Sampling 100% - Reporting 50%	West-Azarbaygan	Ashouye 1	4

- Lab 70 - Total physical progression 70%	- Total physical progression 60%			
- Information collection completion - Explanatory studies field functions 100% - Lab reviews and sampling 100% - Total physical progression	- Information collection completion - Explanatory studies field functions 100% - Lab reviews and sampling 40% - Total physical progression 45%	Kordestan	Bane	5
- Information collection completion - Sampling 100% - Lab analyses 80% - Total physical progression 80%	- Information collection completion - Sampling 100% - Lab analyses 50% - Total physical progression 60%	Ardebil	Lahurd1	6
- Information collection completion	- Information collection completion	Esfehan	Lanjan	7

<ul style="list-style-type: none"> - Sampling 100% - Lab analyses 7% - Total physical progression 7% 	<ul style="list-style-type: none"> - Sampling 100% <ul style="list-style-type: none"> - Lab analyses 50% - Total physical progression 2% 			
<ul style="list-style-type: none"> - Information collection completion - Sampling 100% - Lab analyses 80 - Total physical progression 30 	<ul style="list-style-type: none"> - Information collection completion - Sampling 100% <ul style="list-style-type: none"> - Lab analyses 4% - Total physical progression 30% 	Markazi	Salafchegan	8
<ul style="list-style-type: none"> - Information collection completion - Sampling 50% - Lab analyses 20% - Total physical progression 40% 	<ul style="list-style-type: none"> - Information collection completion - Sampling 100% <ul style="list-style-type: none"> - Lab analyses 10% - Total physical progression 20 	Ardebil	Meshkin-shahr	9

<ul style="list-style-type: none"> - Information collection completion - Sampling 100% - Lab analyses 70% - Total physical progression 60% 	<ul style="list-style-type: none"> - Information collection completion - Sampling 100% - Total physical progression 40% 	Khorasan Razavi	Nayshabur1	10
<ul style="list-style-type: none"> - Information collection completion - Sampling 100% - Lab analyses 70% - Total physical progression 60% 	<ul style="list-style-type: none"> - Information collection completion - Sampling 100% - Total physical progression 40% 	Khorasan Razavi	Nayshaburz	11

At first six months, the equivalent 6/63 geochemical maps have been prepared.

The geochemical reviews completion at 1: 25000 scale, that has been began by the conductive companies at past year, has approached from equivalent 9/8 maps in 1385 to 18/6 maps in 1386. (At first six months 86, the equivalent 8/8 maps have been prepared by the consultive companies).

Final progression percent		Province	Contractor	1: 25000 map name	Information layer	Range
86	85					
25	0	Ardebil	Kan Iran	Soltan Anuch	Geochemical	1
20	0	Hamedan	Payvand Madan Ara	Tuirserkan I (Asad Abad region)	Geochemical (Asad Abad region)	1 2
30	0	Hamedan	Frazamin Sakht	TuirserkanII (virabi region)	Geochemical	3
30	0	Kerman	Aragon	Sardoie I SardoieII	Geochemical	4
25	0	Kerman	Pazhoheshgaran Pust zamin	(Gerdozar-Baqe Rahi region)	Geochemical	5
20	0	Kerman	Itouk	Sardoie-Esfandaghe region	Geochemical	6
25	0	Kerman	Pars kani	Davaran I(udarag region)	Geochemical	7
25	0	Kerman	Kavoushgaran	Davaran II (Dare renj region)	Geochemical	8
20	0	Kerman	Tehran padir	Baghat I (Chahghabri region)	Geochemical	9
30	0	Ardebil	Khak khob	Anbaran-Nushtagh	Geochemical	10

				region		
15	0	Khorasan	Kankavan madan shiraz	Kamrivar khami region	Geochemical	11
20	0	Markazi	Zist Bum samara shiraz	Arak I (North Bakhtar Arak region)	Geochemical	12
25	0	Markazi	Kusha Madan	Arak II (south-Arak)	Geochemical	13
25	0	East-Azarbayjan	Tosee uloom zamin	Ghare chaman I (kolhar region)	Geochemical	14
25	0	East-Azarbayjan	Tosee uloom Zamin	Ghare chaman II (Dizaj-Aghbolagh axis regions)	Geochemical	15
35	0	Kordestan	Zamin Kavush moien	Mik village region	Geochemical	16
25	0	Kordestan	Pijab kavush	Taze- Abad Galane	Geochemical	17
25	0	East-Azarbayjan	Zarkouh Ekteshaf	Kalibar I	Geochemical	18
25	0	East-Azarbayjan	Pijab kansar	Kalibar II	Geochemical	19
5	0	West-Azarbayjan	Yaran madan Aray	Mahabad I	Geochemical	20
70	60	West-Azarbayjan	Zarnab	Naghade 1	Geochemical	21
85	75	West-	Itook	Naghade 2	Geochemical	22

		Azərbayjan				
90	60	West-Azərbayjan	Pars Kani	Naghade 3	Geochemical	23
95	95	West-Azərbayjan	Kan Iran	Naghade 4	Geochemical	24
85	60	Esfehan	Toosee uloom	Delijan 1	Geochemical	25
85	45	Esfehan	Kavushgaran	Delijan 2	Geochemical	26
85	45	Esfehan	Kusha Madan	Delijan 3	Geochemical	27
95	45	Esfehan	Pay sang	Delijan 4	Geochemical	28
95	45	Esfehan	Hampabehine	Delijan 5	Geochemical	29
70	60	Kerman	Kavush kansar	Baft 1&2	Geochemical	30
70	60	Kerman	Toosee uloom	Baft 3&4	Geochemical	31
95	70	Ardebil	Pichab kavush	Meshkin-shahr 1	Geochemical	32
95	70	Ardebil	Kan-azin	Meshkin-Shahr 2	Geochemical	33
95	60	Hamedan	Payvand Madonara	Razan 1	Geochemical	34
90	70	Kerman	Madan-kav	Mohammad-Abad	Geochemical	35
85	60	Hamedan	Khak-khob	Razan 2	Geochemical	36

7-2-2- Exploratory review at the general and search phases:

Physical Progression percent in 1385	Province	Project Name
<ul style="list-style-type: none"> - Previous information processing and collection 2% - Mining-geology map preparation 1/005 3% - Previous tunnel detergency, sump, trench drill and design 	East-Azərbayjan	Promising regions search at Anigh Zone

<p>12%</p> <ul style="list-style-type: none"> - Mineralization zones and trenches sampling 4% - XRD, Finished and thin sections study and preparation 0/4% - Total project progression percent 21/2% 		
<ul style="list-style-type: none"> - Previous information processing and collection and priority regions determination 1/25% - Priority regions field geology traverses and regions layout at earth maps 8/75% - Mineralization zones and trenches sampling 3% - XRD, Finished and thin sections study and preparation 1/5% - Total samples chemical analyzes and preparation 1/5% - Samples analyzes and preparation by method of ICP 1/5% - Total project progression percent 17/5% 	Mazandaran	Bauxite- Laterite and refractory materials detection at kiasar-khoshyeylagh axis
<ul style="list-style-type: none"> - Previous information processing and collection and priority regions determination 	Qazvin	Abandoned mines study and review

<p>0/1%</p> <ul style="list-style-type: none"> - Total project progression percent 0/1% 		
<ul style="list-style-type: none"> - Previous information processing and collection 0/25% - Field review and abandoned mines evaluation and mining geology map preparation from vulnerable regions 3% - Mineralization zones and trenches sampling 6% - Samples 10 elements analyze and preparation 0/7% - XRD, Finished and thin sections study and preparation 0/2% - Data processing and priority regions determination with next exploratory phase service description and report providing 3/75% - Total project progression percent 13/9% 	<p>Charmahal and Bakhtiyari</p>	<p>Abandoned mines study and review</p>
<ul style="list-style-type: none"> - Previous information processing and collection 0/25% - Field review and abandoned mines evaluation and mining geology map preparation from 	<p>Esfehan</p>	

<p>vulnerable regions 3%</p> <ul style="list-style-type: none"> - Previous tunnel detergency, exploratory sump, and trench drill and design 0/05% - Mineralization zones and trenches sampling 4/5% - Samples 10 elements analyze and preparation 0/4% - XRD, Finished and thin sections study and preparation 0/05% - Total project progression percent 7/65% 		
<ul style="list-style-type: none"> - Geophysical studies by Ip method 1% - High-grade zones introduction 0/04% - Total project progression percent 1/04% 	<p>Kohkiluye and Boyerahmad</p>	<p>Sedimentary copper promising region search at khongah- Dehmadan</p>
<ul style="list-style-type: none"> - 1:25000 economic geology map preparation 0/15% - Mineralized sections and mining veins non-systematic sampling 0/2% - Mineralized sections and mining veins systematic sampling 1/5% - Exploratory sump and trench drill and design 0/1% - Sumps and trenches longitude 	<p>Esfahan</p>	<p>Gardane- Rokh(Latarik) Zine, lead, mercury, gold promising region</p>

<p>sections map preparation at 1:100 or 1: 200% scale</p> <ul style="list-style-type: none"> - Geophysical studies performing by IP &RS method 1% - Mineralization zones and trenches sampling 0/6% - XRD&XRF, finished sections study and preparation 0/75% - Mining report preparation and drilling points 0/03% - Total project progression percent 4/23% 		
<ul style="list-style-type: none"> - 1:100 topography map preparation 1% - coring drill 14% - Monitoring to drill functions, cores logging and sampling 1/25% - Total project progression percent 16/25% 	Kerman	Midook(Latala) promising region general exploration
<ul style="list-style-type: none"> - 1:25000 economic economic geology map preparation 8/5% - Geophysics studies performing by IP&RS method 8% - Mineralized sections and mining veins non-systematic sampling 14/25% - Mineralized zones and mining veins systematic sampling 8% - Surface pores sampling 4% 	Esfahan	Zine,lead,gold promising region at Ganharan-Asgaran (darebid)

<ul style="list-style-type: none"> - Mineralization zones and trenches sampling 7% - Samples analyzes 3/5% - Samples study and analyze and preparation 0/5% - XRD, XRF, finished sections study and preparation 3% - Total project progression percent 56/75% 		
<ul style="list-style-type: none"> - Sounding by coring method (design and performance)12% - Total project progression percent 12% 	West-Azarbayjan	Kharape polymetal gold general exploration
<ul style="list-style-type: none"> - Exploratory tunnels detergency 3% - Trenches and pores longitude sections map preparation at 1:100 or 2,1:200% - Mineralization zones and trenches sampling 2% - Finished and thin sections study and preparation 1/5% - Transitional elements and 10 elements gold analyze and preparation 1% - Samples analyze and preparation by ICP method 2/5% - Total project progression percent 12% 	Yazd	Ahmad-Abad molybdenum general exploration

<ul style="list-style-type: none"> - Previous information processing and collecting 5% - Remote sensing studies performing using aster data 2/5% - Total project progression percent 7/5% 	Zanjan	Iron detection at allot meteorites
<ul style="list-style-type: none"> - Previous information processing and collecting and priority regions determination 0/5% - Remote sensing reviews performing using aster data & TM 0/75% - Total project progression percent 1/25% 	Tehran	Gold detection at firuzkouh-Taleghan azis
<ul style="list-style-type: none"> - Previous information processing and collecting 2/5% - Total project progression percent 2/5% 	East-Azərbayjan	Mardaghom-Luli mining region general exploration
<ul style="list-style-type: none"> - Previous information processing and collecting 4/25% - Total project progression percent 4/25% 	East-Azərbayjan	Kouh shaypur dagh mining region general exploration
<ul style="list-style-type: none"> - Previous information processing and collecting 3/5% - Total project progression percent 3/5% 	East-Azərbayjan	Ghaldar shaykh javan region general exploration
<ul style="list-style-type: none"> - Previous information 	East-	Karigan general

processing and collecting 4/25% - Total project progression percent 4/25%	Azarbayjan	exploration
- Information collection 4/5% - Office affairs 3/5% - Field survey 10% - Lab 3% - Total project progression percent 21%	Khorasan	Sheshtamad-kadkan general exploration
- Pervious information processing and collecting 3/5% - Remote sensing studies performing using aster and altered regions determination 3% - Field survey 35% - Samples analyze and Lab. Studies 2% - Total project progression percent 34/5%	South-Khorasan	Epithermal and porphyry reserves exploration and search at khosef-Basiran oasis

Other activities:

- To perform the gold exploration geophysical project at kerman province (Anar-Miduk) by IP and RS method that has fulfilled it's field functions and it's report is under preparation. (With physical progression 96%).
- To perform the potash exploration geophysical project at zanzan province (Ajichay) by magnetometer and gravity method that has fulfilled it's field functions and it's report is under preparation. (with physical progression 90%).

- To perform the massive sulfide exploration geophysical project at kerman province (Zahg-Dare) by IP and RS method that has fulfilled it's field functions and is at the report preparation stage. (with physical progression 82%)
- To perform the potash exploration project at east-Azarbajan province (Miyane-Ghare aghaj) by the magnetometer method (with physical progression 90%)
- To perform the potash exploration project at Esfehan province (gavkhoni) by the RS and gravity method with the physical progression 100%.
- To perform the bitumen exploration project at Ilam province by RS method with the physical progression 100%.
- To perform the gold exploration project at south- khorasan province by IP & RS method with the physical progression 100%
- To perform the pre-feasibility studies according to the following table:

<ul style="list-style-type: none"> - Mining technical review and the processing 4% - Market study 9/1% - Report preparation 2/7% - Exploration certificate obtaining 0/5% - Total project progression percent 15/85% 	Hormozgan	Shaykh-ali copper project
<ul style="list-style-type: none"> - Exploration certificate obtaining 2% - Total project progression 	Khorasan- Razavi	Torghabe gold exploration project

percent 2%		
- Reserve estimate studies 8/1%	Yazd	Gazestan
- Report preparation 9/9%		phosphate project

8- Exploratory facility providing for the private sector:

At first three months 1386, the 8333 number for the exploration requests was accepted that of 658 cases approached to the exploration permit issue stage, and 216 exploration certificate was issued which was tended to explore the mineral with 278307/509/000 ton absolute reserve.

Exploratory costs (M.Rials)	Absolute reserve (H.T)	Region area	Exploration certificate	Region area	Explorati on permit	Exploration request	Province	Range
1765	-	23/76	4	-	-	115	East-Azərbayjan	1
18597/5	10532	77/5505	19	449/6525	47	698	West- Azərbaycan	2
3968	20186/5	34/63	20	1251/4	82	820	Esfahan	3
454/6	8197/49	0/585	6	10/75	8	14	İlam	4
421/75	15125/76	8/56	8	89/385	15	82	Ardebil	5
42	23979	2/8	4	7/615	9	5	Bushehr	6
70	5800	5/05	2	22/29	7	90	Tehran	7
325	2385	0/89	2	14/03	20	145	Charmahale&Bakhtiyari	8
5043	74189	-	36	-	39	657	Khorasan-Razavi	9
70	6	3/5	31/9	16/5	55	94	North.Khorasan	10
1172	4391	60/88	12	845/4	44	360	South.khorasan	11

185	61147/46	4/68	13	61/413	27	138	Khozestan	12
1190	1390	16/6	4	627/63	37	426	Zanjan	13
393/3787	7360	17	3	129/625	16	62	Systan&Baluchestan	14
635/87	1517/5	19/82	5	243/02	19	305	Semnan	15
7815	4880	3/65	5	30/9	8	145	Fars	16
80/5	0/75	12/5	1	11/82	2	33	Qom	17
-	-	-	-	80/96	7	58	Qazvin	18
292	3104	32/52	5	94/3	15	344	Kordestan	19
5010	790	56/52	9	1170/51	69	1809	Kerman	20
637	35/05	44/2	3	67/965	26	150	Kermanshah	21
124/4	7987	0/813	2	-	-	6	Kohkiluye&Boyerahmad	22
-	-	-	-	-	-	18	Golestan	23
105	4250	1/42	1	61/55	8	168	Gilan	24
-	-	-	-	107/82	25	134	Lorestan	25
0/2784	582/4	1/562 5	2	3	1	131	Mazandaran	26
122	20	3/02	1	30/75	10	98	Markazi	27
211/665	17457/34	16/3	4	195/25	14	276	Hormozgan	28

204	1047/059	32/43	3	69/35	9	124	Hamedan	29
1303/5	1947/2	56/7	11	560/1	39	828	Yazd	30
50238/4421	278307/509	537/941	216/9	6252/9855	658	8333		som

9- Mineral processing and laboratory studies:

9-1- laboratory studies:

At first six months 1386, the laboratory reviews have been performed as a sample number and a composition number at a different parts as follows:

Reviewed sample number					
Sample preparation	Isotopic researches	Geochemistry Lab	Chemistry lab	Mineralogy lab	Month
700	250	135	221	307	Farvardin
1277	897	618	686	606	Ordibehesht
626	782	620	599	595	Khordad
825	1061	886	549	488	Tir
1247	849	854	760	613	Mordad
802	842	774	834	747	Shahrivar
5477	4681	3887	3649	3356	Sum

- The reviewed samples number equivalent to 15573 samples.

Composition number					
Sample preparation	Isotopic researches	Geochemistry Lab	Chemistry lab	Mineralogy lab	Month
	250	1042	1052	1474	Farvardin

	1193	9899	10535	3563	Ordibehesht
	522	6613	7680	5147	Khordad
	1120	18235	6945	3475	Tir
	2153	14780	1583	3850	Mordad
	842	10653	8593	4453	Shahrivar
	6080	61222	36388	21962	sum

- The element composition number of 125652 element.

8-2- Mineral dressing and processing activities at laboratory and semi- industry scale:

Mineral dressing:

Research projects: phosphate Mendon report completion technological sampling 450kg from slay coppers at hormozgan province, the gradation and grade distribution determination, crushing and preparation, Leaching, 109 samples ground from hormozgan province slag, ground and leaching, crushing and preparation, mill, scrape and classification, 124 samples solution and ground from lar phosphate.

Process mineralogy studies: 20 samples illuminate microscopic studies at Chabahr, 2 samples garnet at Deh-Salam, 2 samples quartzite at Ituk, 4 samples iron at Qazvin, 1 sample copper slag at Zagh-dare, 5 samples magnetite at Birjand, 1kg for preparing the finished section from Yazd iron ore, 2 samples biotite dimensions determination and separation by microscopic and magnetic and heavy liquids methods, phases statistical study involved with the finish section quartz 1.

Service activities: 30 samples for a gradation, crushing, special weight, mill, and classification processing:

Atask Kooch fluorine processing (54 ground samples, 40 samples of flotation and mill)

Bahabad molybdenum processing (85 samples for a ground, multigravity, slide stage, crushing, mill, and sieve composition.

Marvsat magnetite, Godarsabz manganese and Ghasemabad manganese report preparation.

Khonik magnetite processing (1 sample crushing, 10 samples sieve composition, 18 samples slide stage, 3 samples mill, 14 sample ground.

Nayriz quartzite processing (1 sample crashing, 2 samples magnetic)

Kerman barite processing (52 samples for a spiral, Russian stage . Mill, sieve composition, slide stage. multigravity and ground).

Service activities:

Titanium separation by a slide stage, dry magnetic, electrostatic methods of 14 samples, biotite separation by 4 samples dry magnetic method, copper slay separation by 8 samples multi gravity method, iron separation by 33 samples ground and dry magnetic and crushing methods, shirkouhak magnesite separation by 1 sample crushing method, Hired gold separation (carbonated – silicates sample) by 1 sample crushing method. Various samples: 25 samples crushing, 41 samples ground, 31 samples special weight.

Other activities:

I vanaki potash sampling, the worked ferrosilicon 250 k separation from the waste materials by wet magnetic device .

Training:

The specialized workshops and the general and specialized courses held including:

Held place	Training amount(person X hour)	Time (hour)	Participants (person)	Training course name	Range
Tehran geology organization	80	4	20	Training workshop about magnetite, apatite deposits exploration at bafegh region	1
Tehran geology organization	1620	180	9	Are Gis software preliminary training course	2
Tehran geology organization	50400	280	180	ICDL I & ICDL II courses	3
Tehran geology organization	900	30	30	English language training course held by jihad university professors	4
Tehran geology organization	102	6	17	Lecture providing in the field of the seismotectonic by three person from French professors	5
Tehran geology organization	448	14	32	Sedimentology, sedimentary processes and seas past	6

				rebuilding training workshop	
Tehran geology organization	320	10	32	Sedimentary geochemistry training workshop	7
Tehran geology organization	434	14	31	Sea chemistry training workshop	8
Tehran geology organization	462	14	33	Oceanography basic and principle training workshop	9
Tehran geology organization	378	14	27	Sea geophysics training workshop	10
Tehran geology organization	174	6	29	Geochronology training workshop	11
Tehran geology organization	280	10	28	Bed morphology and bathymetry training workshop	12
Mashhad geology organization	576	24	24	1: 25000 applied geology maps preparation method training workshop	13
Tehran geology organization	76	4	19	Successful managers and institutional communications training workshop	14
Mah Neshan and Tehran geology	1488	48	31	1:25000 applied geology maps tectonic surveys practical and	15

organization				theoretical training course	
Tehran geology organization	50	2/5	20	HSE training course (health, security and environment)	16

17- Training council session held and the organization training policies determination.

18- Contractual employment test held among 841 experts at different courses of geology, chemistry, mines affairs, accounting, librarianship, foreign languages translating, cartography and hardware affairs.

19- Scientific test and two person acceptance for military service and six persons performance surveillance of soldiers during the military service that one person is a discharge and 5 persons are under service.

20- To prepare the state civil mining exploration and geology organization training needs report and provide it to the state civil planning and management organization.

21- To held ICDL II test and complete the participates forms at class, and send it to Tehran province technical vocational organization for issuing a document.

22- To train 96 trainees at different study classes at different sections of organization as follows:

- Geology assistant group on 608 working day amount and everyday 8 hours at the whole 2880 hours.
- Exploration group at mastering mine and economic on 327 working day amount and every day 8 hours at the whole 8 hours.

- Mineral processing group on 327 working day amount and everyday 7 hours at the whole 2616 hours.
- Geophysics group on 269 working day amount and every day 8 hours at the whole 2152 hours.
- Chemistry group at bachelor degree on 386 working day amount and every day 8 hours at the whole 3088 hours and at art school and associate's degree on 472 working day amount and every day 8 hours at the whole 3776 hours.
- Accounting and computer at high school on 267 working day amount and every day 8 hours at the whole 2136 hours.

International cooperation:

- One expert visit from koba country from the earth sciences database and organization.
- Two experts visit from France country related to MEBE plan(Zagrus- Koupeh dagh- Alborz regions structural review)
- Three experts visit from France from north .Tehran, kahrizak, Taleghan. Firouzkouh, Zanjan, Tabriz regions for estimating earthquake danger in Iran.
- Five experts entrance from Czech republic for the agreement signature related to the map preparation
- Three experts entrance from sudan country for the common cooperation.
- 12 Eko secretariat experts entrance for Eko sessions held, and visit from organization.
- 10 experts entrance from India country for training

To inform and provide the service and scientific possibilities:

- 3302 clients such as student, researcher and student has used from the library internet, scientific publications, books and sources possibilities
- Listing the Latin books, 60 titles
- Listing CD, 100 titles
- Barcode and magnetic tape, 777 cases.
- To prepare (record, magnetic tape, and barcode)Latin magazines, 6000 volume.
- To list and prepare and enter a Latin and Persian articles information, 260 titles.
- To held an exhibition from the purchased books from international exhibition at library.
- To cooperate to help Imam Khomeini works exhibition at the library
- To bay books for karaj center applied research center library.
- To set up karaj center library
- To buy books for Afghanistan country
- To send a report, publications and book as award to centers and the cooperation with the centers libraries
- To index and edit the thesis's
- To write the reference books, source books and all of library computers properties stamp.

Public relations:

- Persian news statistic- First six months 1386
- Organization news statistic at newspapers-First six months 1386.
- English news statistic- First six months 1386.

Earth sciences national database:

1- to collect and prepare an information

The earth sciences national data base at first six months 1386, with completing the established data bases in 1385 has taken an action to prepare a new databases.

Earthquake database:

- To provide an information more than 1929 earthquake related to 1386
- To prepare a map information (4 title)
- To provide a thematic report 4 titles (Tabriz city seismicity report, kohak Qom earthquake report, etc)

Geotechnical database:

- Iran geotechnical bibliography data base: In this section, the search is done under two title namely “search with map” and “advanced search”. List of book 1843 titles, report 9370 titles, article 1069 titles, thesis 480 titles, periodical 46, media 141, and map 3453 titles have been provided with the subject of the geotechnical with available centers and references that are updating.
- Geotechnical national; database “information record and entrance more than geotechnical 3100 sheets at site

Paleontology data base:

- To formulate a service explanation, to set a contract and the running Iran Permian radiolarians information phase.
- To formulate a service and to set a contract (for preparing Devonian foraminifers database)

Medical geology database:

- To enter a medical geology database
- To extract a diseases information summary and the related elements
- To search the related words (about 85 words)
- To prepare a map and report (arsenic and health relationship)

Roads geology Atlas:

- To prepare chalus -Tehran route map and guide book and khoramabad- Qom route map
- To extract an information deficiencies at two routes of the roads geology atlas and under the information completion.

Basic faults atlas:

- To prepare a final report from Iran basic faults atlas
- To set a service description for preparing Iran basic faults map

Iran geotourism database:

- To prepare and enter a geotourism report of markazi, Gilan west Azarbayjan, kermanshah, Boushehr, Hormozgan, Zanjan, Kerman, sistan& Bluchestan, Qazvin, Chaharmahal & Bakhtiari, Tehran, Semnan , Qom, south- Khorasan provinces at site
- To prepare Venezuela geotourism and Damavand geopark report.

Stratigraphy database:

To complete a stratigraphy data base report (Precambrian-Paleozoic phase)

To design a site and formulate a first design of Iran stratigraphy book.

To design and disassemble a stratigraphy database software system and begin to enter an information at base

- To prepare the folds picture words dictionary

Mineral world market databank:

To enter an export & import, production and... mineral 2003-2005 information

Countries earth sciences database:

- To prepare 12 countries earth sciences report and provide it at base site.

Visitors statistic at first six months 1386	Pages	Range
1019440	Earth sciences lists	1
405794	earthquake data	2
26694	base geotechnical	3
810255	database earth sciences lab.	4
217657	Database mineral processing database	5
585226	mines database	6

2- Map information preparation and collection at a different scales:

To formulate a service description and provide Iran 10/25000 geology sheets information through Internet network.

To organization a tectonic maps

To organize the roads information layer

To prepare a map information organization service explanation on 1: 100000 scale.

3- Internet, Intranet, and network management

To change a structure in order to promote an internet and network management system

To promote a network security software

To update the existing systems ID certificate and review the possible variations in 1386.

To apply the necessary variations for promoting a network system and base internet.

4- To provide the database information at a public and specialized section through an Internet network including:

News section: this section inserts the most current news related to the earth sciences, industry and it's related cases with providing more than 30 news daily.

Question and answer section: This section is for exchanging an information between different users pf the earth sciences at a different levels, with more than 24453 answers to 16156 questions of specialize users at local site. At first six months this year, more than 1684 questions and 2483 answers and 397 requests have been exchanged.

Links sections: in this section is performed the database introduction related to the earth sciences that at first six months 1386, more than 247 Persian links has been introduced.

Events section: the related events informing to the earth sciences are performed in this section. At first six months this year, 26

different external and internal events at a Persian section and 8 events at an English section at site has been recorded.

Members section: to provide a specialized service to the internet base members. At first six months, more than 1009 users have been accepted to a site membership.

Album and pictures section: in this section, the pictures related to a different branches relating to an earth sciences have been provided.

Down load section: in this section, the downloadable information such as map, report and etc has been put as a different shapes, and it was possible the receive of this information without a cost payment. At first six months, this section has been entered to an information from 5100 file subjects after changing a structure.

Publications section: publications list related to an earth sciences have been provided in this section. At first six months 1386. The 52 publications number has been introduced and provided in a Persian section.

Articles section: this section has been set up to different articles with regards to the students and researchers needs. At first six months 1386, a more than 2029 Persian articles and 810 English articles have been provided in this section.

Thematic reports: To prepare, and provide an information at a thematic reports framework at a different subsections at site www.Ngdir.Ir. During first six months, more than 250 reports have been entered to a site at a different subjects.

Specialized words dictionary section: The access possibility to list and definitions more than 2240 words of the geology and the

related sciences have been provided in this section at first six months 1386 , it has provided more than 590 words.

Training courses section: in this page has been collected and provided a set of training courses related to an earth sciences, that has been introduced more than 500 course3s at first six months this year.

Information providing section to a children: This section has been designed in order to promote the students scientific level and their more familiar to a geology concepts, and it consists a geology, energy, volcanic, earth, astrology, water cycle and earthquake sections.

Visits statistic at first six months 1386	Different sections	Range
484817	News	1
302466	Question & answer	2
47206	Links	3
39863	Events	4
92418	Member	5
654422	Pictures album	6
118913	Down load	7
89720	Publications	8
380427	Articles	9
209766	Specialized words dictionary	10

24077	Training courses	11
670991	Children	12
1937108	Thematic reports	13

Information Technology:

- 1- Financial and administrative management information system(MIS)
 - To prepare a new subsystems of international affairs including : to invite from foreign manager and experts, to request the mission for aboard, to offer the mission for aboard, the agreements, international affairs offline system.
 - To prepare the foreign languages form, the cooperation history with the countries (organizations and companies)
 - To make an operational the plant visit and a maintenance request system, to train the personnel and to perform the requested variations .
 - To make an operational the contracts affairs system and to make a new forms
 - To prepare the geology 1: 100,000 & 1:25000 maps preparation management system for entering data and to prepare a part of the related geology maps information.
 - To review a personnel systems, present and absent, secretariat and the access level completely and to perform some basic variations for standardizing the systems.
 - To change the centers communication protocol mechanism for transmitting a present and absent information (vacation

and mission orders) and secretariat from mashhad and sadeghie centers to organization and trial test .

- To make an operational the laboratories system and the mineral processing for requesting the organization external and internal analyze and to prepare the requested forms of each group.

2- Software production:

- Mines and industries international projects management system preparation
- Foraminifera rank, fossil information database software preparation
- Museum samples management system and the state civil mining exploration and geology organization virtual museum establishment: At present, the service description of this system, the administrative affairs and preparation related to a contractor identification is doing for prepare a system.
- Anbar- Zahedan center geology samples management soft wave: At present, this system has been provided as a trial at Zahedan center as a temporary delivery, so that it will use as an operational after a final approve and with coordinating Zahedan design executor and at other organization centers.
- Mining monitoring and controlling software of Semnan province mines and industries organization exploration assistant:

At percent, this system has been provided as a trial and temporary delivery, that it will use as an operational after a final approve and with coordinating mines and industries ministry mining assistant at

other provinces and the related organization to mines and industries ministry.

3- Portal:

- To set of Iran geotourism website and to insert 45 phenomenon's information (each province almost one phenomenon)
- To prepare and design the related systems and soft waves to mine and geology researchers site

- Electronic store:

- To review the portal content and to update a new parts and eliminate the existing faults over some modules.
- To change an informing structure
- To change the current, examination portal structure : it has been performed for a more and better familiar to a portal sheets at all of different portal systems and groups. About 1000 sheets (module – static) of portal has been reviewed that it's results have been documented , and has been used for changing the informing structure, and applying a variations. Also some cases have been revised such as informational and software problems that has a need to a variations and modification, and at some a need to a variations and modification, and at some cases have been applied these variations.

4- Organization vehicles tracking and monitoring system:

- To install this system on the organization vehicles.

5- Software and network:

A- software

- All service requests number of section is 893 cases at first six months year.

B- Network

- Daily servers support
- Daily servers support at administrative and non-administrative hours in clued the following services:
 - 1- Mail server, 2- VINS, 3- DNS, 4- DHCP, 5- Active Directory 6- IIS 7- ISA server, 8- Proxy. 9- VPN 10- FTP & Etc
- To install and setup DHCP server at DMZ
- Bluecoat and server pull
- To configure and install the local database for filtering with regards to web sense embargo
- To receive and update the data base as monthly
- To configure the server and the related equipments for working with this database
- To review and observe the Bluecoat events for reviewing the trouble shoat, performance and method
- To prepare the support version from the existing configurations
- To promote the network platform from WIN sever 2000 to windows server 2003.
- The server promotion work has been finalized at percent, and the users transition work to a new server is performing
- To install and set up HP open view monitoring server software
 - Data bases maintenance and disassembling

- Data transition method design from organization basic databases to mirror server
- Data base monitoring disassembling
- Related documentations preparation